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ABSTRACT

Members of the Technical Working Group representing 14 Unesco member states met (1) to review and discuss major problems, issues, and prospects in the region for educational broadcasting; (2) to identify training needs for promotion of educational broadcasting; and (3) to develop guidelines for the production, use, and evaluation of educational radio/television programmes for facilitating the programs of universalization of education and integrated rural development. This report presents the highlights of each country's experiences in educational broadcasting; discussions of common problems, issues, trends, and training needs; and guidelines formulated by the participants, together with recommendations and suggestions. The appendices include the agenda of the meeting, a list of the 18 participants and the inaugural address by the Deputy Minister of Education of Malaysia. (CHC)

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ED205164

ASIAN PROGRAMME OF EDUCATIONAL INNOVATION FOR DEVELOPMENT APEID

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Production and utilization of educational broadcasting programmes

Report of an APEID Technical Working Group Meeting on Educational Broadcasting

Kuala Lumpur, Malaysia
19 November – 1 December 1979

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BKA/80/OP/412-1200

The APEID Technical Working Group Meeting on Educational Broadcasting was jointly organized by:

The Educational Media Service (EMS), Ministry of Education, Malaysia

and

The Asian Centre of Educational Innovation for Development (ACEID), Unesco, Bangkok

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Chapter I

INTRODUCTION

In accordance with the work plan of APEID for the second cycle (1978 – 81), the Technical Working Group Meeting on Educational Broadcasting was convened at Institut Penyiaran Tun Abdul Razak (IPTAR)/Asia-Pacific Institute of Broadcasting Development (AIBD) Bukit Putra, Angkasapuri, Kuala Lumpur, Malaysia from 19 November to 1 December 1979.

The Meeting was jointly organized by the Educational Media Service (EMS), Ministry of Education, Malaysia, an Associated Centre of APEID, and the Asian Centre of Educational Innovation for Development (ACEID), Unesco Regional Office for Education in Asia and Oceania, Bangkok.

Objectives of the Meeting

The objectives of the Meeting were:

1. To review and discuss major problems, issues and prospects in the region in in the area of educational broadcasting relating to universalization of education and integrated rural development;
2. To identify training needs for promotion of educational broadcasting; and
3. To develop guidelines for the production, use and evaluation of educational radio/TV programmes for facilitating the programmes of universalization of education and integrated rural development.

Participation

Eighteen participants from fourteen Unesco Member States attended the Meeting: one each from Afghanistan, Australia, Bangladesh, India, Indonesia, Japan, Nepal, Papua New Guinea, the Philippines, Republic of Korea, Singapore, Sri Lanka and Thailand; and five from Malaysia. ACEID was represented by the Asistant Programme Specialist in Educational Technology. (The list of participants is at Annex II.)

Inauguration

The Meeting was inaugurated by His Excellency Datuk Chan Siang Sun, Deputy Minister of Education of the Government of Malaysia. In delivering his inaugural address, the Deputy Minister of Education extended his warm welcome to all the participants. He observed that the methodology in teaching techniques is now undergoing a tremendous change, and it is in line with the fast development of technology itself. In this connection, he stressed that education in the classroom, in order to progress, has to keep up with the expansion of knowledge, which is at a rapid pace. The use of talk and chalk method of teaching is no longer sufficient and becomes less stimulating as compared to learning which is reinforced through various sensory media. He emphasized the necessity for effective use of various media by teachers and the supplementary and complementary roles played by educational media. (The text of the address is given in Annex III.)

Before the inauguration of the Meeting, Mr. Cheah Tat Huat, Director, Educational Media Service, as Chairman of the Meeting Organizing Committee, welcomed the participants on behalf of the host institution.

Mr. Ryo Watanabe welcomed the participants on behalf of Unesco and thanked the Government of Malaysia and its Ministry of Education for its continuous support and co-operation extended to APEID; the Director and the staff of the Educational Media Service for hosting the Meeting and for their outstanding preparatory work; and IPTAR/AIBD for making its facilities available to the Meeting.

The inauguration was attended, among others, by Mr. K. Satrap, Regional Representative, UNDP.

Officers of the Meeting

At the first plenary session, the Meeting unanimously elected Dr. Nuruddin bin Jamin (Malaysia) as Chairman; Mr. T. Jankiraman (India) and Dr. Toshiyuki Mizukoshi (Japan) as Vice-chairmen; and Mr. Gordon Smith (Australia) as Rapporteur-General; Mr. Ishak bin Hamzah (Malaysia) and Miss Soledad A. Vargas (Philippines) as Rapporteurs. Mr. Ryo Watanabe (Unesco) acted as Secretary of the Meeting. The Meeting also set up a Steering Committee comprising the officers of the Meeting and an ACEID/Unesco staff.

Work of the Meeting

The agenda of the Meeting is given in Annex I.

In the first few plenary sessions the Meeting discussed the country papers presented by participants. In the following sessions, the Meeting considered and analysed trends, problems and training needs in relation to educational broadcasting programmes. The Meeting also formulated guidelines and alternative strategies for production, utilization and evaluation of educational radio/TV programmes.

During the Meeting, study visits to the Educational Media Service (EMS) and the Radio TV Malaysia (RTM), and playback sessions of ETV and educational radio programmes of Australia, Bangladesh, India, Japan and Malaysia were also arranged.

The Report

A draft report was presented at the concluding session of the Meeting on 1 December 1979 and was adopted with some modifications. The suggested modifications have been incorporated in this final report.

Chapter II

HIGHLIGHTS OF COUNTRY EXPERIENCES

This chapter covers the present status of educational broadcasting in the participating countries of the Technical Working Group Meeting.

It was noted that there is an increasing use of educational broadcasting for meeting the specific needs of the countries. Radio broadcasting is extensively used in one way or another in all countries except Singapore where the pre-recorded audio tapes are distributed to schools. Television is also becoming a popular medium in many countries.

An overall summary of educational broadcasting being used in the participating countries is presented in Table 1.

Table 1: A Summary of Educational Broadcasting in the Participating Countries

Country	Media		Target Audience		Control of Broadcasting		Remarks
	TV	Radio	In-school	Out-of-school	Programme Content	Transmission	
Afghanistan		√	Students from 1-12 classes		Educational Radio and TV. Ministry of Education	Ministry of Information and Culture	
Australia		√	Correspondence pupils		Education Department	Flying Doctor Service	
	√	√	K-12		A.B.C.	A.B.C.*	* Australian Broadcasting Commission.
		√	–	√	Various groups, including Education	Public Stations	
		√	Limited	√ (informal)	A.B.C.	A.B.C.	
Bangladesh	√		√	√	Bangladesh TV*	Bangladesh TV	* The media are under the control of the Ministry of Information and Broadcasting.
		√	Grades 6 – 10	√	Radio Bangladesh	Radio Bangladesh	
India	√		– Primary & Secondary		Education Departments as Advisors and helpers in planning and production	DOORDARSHAN (Television)	

Table 1: A Summary of Educational Broadcasting in the Participating Countries *(Cont'd)*

Country	Media		Target Audience		Control of Broadcasting		Remarks
	TV	Radio	In-school	Out-of-school	Programme Content	Transmission	
India (contd.)	√			√	Education Departments and other concerned departments under different ministries	DOORDARSHAN (Television)	
		√	√ Primary & Secondary		– do –	ALL INDIA RADIO	
		√		√ Non-Formal for children of 6-14 age and adults of 15-35 (Mainly rural)	– do –	ALL INDIA RADIO	
		√	University students	Out of College hours	University Correspondence Course Authorities as advisors and helpers in planning and production	ALL INDIA RADIO	
Indonesia		√	Secondary school students		Department of Education and Culture	Department of Information	
		√		Elementary school teachers	– do –	– do –	
		√		Young people, farmers, women's groups, etc.	– do –	Department of Information and private agencies	
	√			Young children	Department of Education and Culture	Department of Information	
		√	University students		University	University	

Table 1: A Summary of Educational Broadcasting in the Participating Countries *(Cont'd)*

Country	Media		Target Audience		Control of Broadcasting		Remarks
	TV	Radio	In-school	Out-of-school	Programme Content	Transmission	
Japan	√	√	Grade K-12		NHK, Local Board of Education	NHK, Local Board of Education Commercial Broadcasting	NHK: Nippon Hoso Kyokai (Japan Broadcasting Corporation)
	√		Special school (Mentally retarded & physically handicapped)		NHK	NHK	
	√	√	Correspondence High School		NHK	NHK	
	√			Housewives	NHK, Commercial Broadcasting	NHK, Commercial Broadcasting	
	√	√		Working adolescents	NHK	NHK	
	√	√		Older groups	NHK	NHK	
	√	√		The masses	NHK, Commercial Broadcasting	NHK, Commercial Broadcasting	
Malaysia		√	√ Primary & Secondary		Ministry of Education	Radio/TV Malaysia, Ministry of Information	
	√		√ Primary & Secondary		– do –	– do –	

Table 1: A Summary of Educational Broadcasting in the Participating Countries *(Cont'd)*

Country	Media		Target Audience		Control of Broadcasting		Remarks
	TV	Radio	In-school	Out-of-school	Programme Content	Transmission	
Nepal		A	√		Ministry of Education	Radio Nepal (Ministry of Information and Broadcasting)	A. School Broadcast for school children
		B		√	– do –	– do –	B. General Broadcast for teachers, parents and students
		C	√	√	– do –	– do –	C. Teachers Programme for target teachers and general teachers
Papua New Guinea		√	Grade 1-6 English		Ministry of Education	N.B.C.*	* National Broadcasting Commission
		√		Teachers	– do –	N.B.C.	
		√	Science 5 & 6		– do –	N.B.C.	
		√	Social Studies 4, 5 & 6		– do –	N.B.C.	
		√	Health 5 & 6		– do –	N.B.C.	
		√		Grade 10 Quiz	– do –	N.B.C.	
		√		University on Air	University	N.B.C.	
Philippines		√	Pupils & students in some metro/ urban places. Teachers	Rural folk, poor youth, unskilled, unemployed farmers, fishermen, housewives	Ministry of Education & Culture (NFE) * MAR & MLGCD * MSSD, MOH, MNR, NMPC	* NMPC * MPI * Commercial Stations	Legend: MEC – Ministry of Education & Culture NFE – Non-Formal Education MAR – Ministry of Agrarian Reform

Table 1: A Summary of Educational Broadcasting in the Participating Countries *(Cont'd)*

Country	Media		Target Audience		Control of Broadcasting		Remarks
	TV	Radio	In-school	Out-of-school	Programme Content	Transmission	
Philippines (contd.)	√		Children/pupils students	General public	MPI, NMPC, MEC-NFE VOP	MPI, NMPC, VOP Commercial Stations KBS-RPN	MLGCD – Ministry of Local Govt. & Community Development MSSD – Ministry of Social Services & Development MOH – Ministry of Health MNR – Ministry of Natural Resources MPI – Ministry of Public Information NMPC – National Media Production Center VOP – Voice of the Philippines KBS-RPN – Kanlaon Broadcasting System-Radio-Philippines Network
Republic of Korea		√	√ Elementary Grade 1-6		Education (KEDI)	KBS*	* Korean Broadcasting System
		√	Junior High School (English)		– do –	KBS	
		√	Correspondence High School		– do –	KBS	
		√	Correspondence Junior College		Seoul National University Education	KBS	
	√		Elementary		KEDI Education	KEDI	
Singapore	√		√		Ministry of Education	Ministry of Culture	

Table 1: A Summary of Educational Broadcasting in the Participating Countries *(Cont'd)*

Country	Media		Target Audience		Control of Broadcasting		Remarks
	TV	Radio	In-school	Out-of-school	Programme Content	Transmission	
Sri Lanka		√	Grades 1-10		Ministry of Education	S.L.B.C.*	* Sri Lanka Broadcasting Corporation.
		√		Open University students	(i) External Services Agency (ESA) (ii) Sri Lanka Institute for Distance Education (SLIDE)	S.L.B.C.*	
Thailand		√	√		Ministry of Education	Ministry of Education (Bangkok) Radio Thailand (provincial) and others	
		√		Radio Correspondence Project for Adults	– do –	Radio Thailand (and later the New Educational Radio Network)	
		√		Teacher Training	– do –	Ministry of Education (later the new network)	
		√	Ramkamhaeng University		Ramkamhaeng University	Radio Thailand Programme 2	
		√	Sukhothai Dharmadhiraj University		Sukhothai University	The new network	
	√			General educational programmes	Ministry of Education	Various TV Channels (mainly Channels 9 and 5)	

Table 1: A Summary of Educational Broadcasting in the Participating Countries *(Cont'd)*

Country	Media		Target Audience		Control of Broadcasting		Remarks
	TV	Radio	In-school	Out-of-school	Programme Content	Transmission	
Thailand (contd.)		√		General Educational Broadcasting Service	– do –	Ministry of Education	
		√		Development Programme	Various Government agencies concerned, e.g. Ministries of Health and Agriculture	Various	

AFGHANISTAN

In 1968 the Educational Radio Broadcasting Center established the Teacher-Training Department in the Ministry of Education and Culture. In 1970 this project succeeded in transmitting the first programme through the radio all over the country twice a week.

Plan operation

1. Teacher-Training Programme
2. Adult Education
3. School Broadcasting

The first stage of Plan Operation was the teacher-training programme. This programme which is broadcast twice a week includes new methods in teaching, child psychology and demonstration lessons. Programmes for the general audience are presented in different forms like dialogue, discussion, drama, report, etc.

Only last year (1978) the Educational Radio/TV Broadcasting Centre was transfered from the Ministry of Education to the Ministry of Information and Culture.

Utilization

Educational programme transmission and radio educational broadcasting has developed considerably because instead of the weekly broadcast there was the daily broadcast. The weekly Television Educational Program was started in October 1978. This TV programme transmits also a weekly programme for secondary schools. The contents are based on curriculum materials and textbooks. This TV programme is aimed at introducing new knowledge and new methods to pupils, teachers and the general audience.

One major problem of the country is that it has only one small TV station and one small radio station and with insufficient equipment.

AUSTRALIA

The organizational set-up

The Education Department of the Australian Broadcasting Commission is an investment of the Federal Government and is independent of the State and Territorial Departments of Education which operate the nation's schools. The Commission models the radio and TV programmes to schools on the general organization of the B.B.C. and directs them to the whole range of the grades from the pre-primary to upper secondary. Its general philosophy is to provide materials that will enrich the school curricula while maintaining a reasonable degree of relevance with the various syllabuses. The Commission has established a network of Advisory Committees to guide it in its programme development and each State Department assigns teachers to work in a liaison capacity between the schools and the A.B.C.'s production stage.

A national Committee recently reviewed the role the Commission plays in implementing the work of the educational authorities and has recommended that the ABC should extend its activities to cater to areas of educational need in post-secondary education, community development and special services to minority groups of several categories.

Programmes produced

The description of Australia's educational broadcasting services is confined to those programmes which are directed towards an identified large audience to achieve specific objectives. It does not include the numerous programmes transmitted by government and commercial stations and which provide a wide variety of cultural and informational materials for the community, but which can be properly categorized as educational.

The Schools of the Air, which are operated by the mainland States' Department of Education generally through the co-operation of the Royal Flying Doctor Service. The

Schools of the Air are typically associated with the Correspondence Schools and provide, through radio, a means for an isolated student to receive individual tuition from a teacher in the syllabuses of the school in which he is enrolled. Syllabus content and presentation are controlled by the Education Department of the host state.

Each School of the Air and its network of students has autonomy to a substantial degree, and the teacher plays a major part in adjusting correspondence lessons to the individual student. The schools are supported by itinerant teachers and by other centralised services, such as AV and library resources.

The programmes are well received throughout the country.

Utilization

A recent innovation into Australian broadcasting is the development of "public broadcasting" which is described as the third sector of broadcasting, growing up alongside the national (ABC) and commercial networks.

A public station may be licensed to any group with minority interest, and cannot be controlled by government or commercial interests. They are seen as serving a limited segment of the population, which may be defined by its residential location or by function. The *public stations* are presently all radio, but legislative provision has been made for their extension to television. They also serve a variety of purposes, such as:

a) formal education with credit-earning subjects associated with courses offered by tertiary institutions;

b) informal education directed to specific and identifiable community needs;

c) information dissemination, including community access.

Future plans

For the future, educational broadcasting in Australia will be influenced by:

a) a government decision to establish a domestic communication satellite by 1984;

b) the development by Departments of Education of alternative means of programme distribution to meet more precisely the needs of students;

c) substantial amendments to the Copyright Act which are now under consideration by the Federal Government.

BANGLADESH

Educational broadcasting in Bangladesh, as in other countries, aims at the improvement of school education in the country by remedying the weakness of the teachers and inadequacies of educational infrastructure and logistics.

At present the whole country, with an area of 55 thousand square miles and a population of about 80 million, is covered by radio broadcasts. Most parts of the country are also covered by television. There are six independent radio stations and one central television station with five relay stations in Bangladesh. As both radio and televison sets are assembled in the country, and readily available in the market, they made an easy access to even far-flung areas of the country. The prices of locally assembled one-band radio and television sets are fixed. Radio and occasionally television sets are distributed free of cost or at subsidised rates to educational institutions, community development centres and various agencies engaged in rural development activities by the Government. High priority is given for the improvement and expansion of both the media, which are under the administrative control and supervision of the Ministry of Information and Broadcasting of the Government. Educational broadcasts of non-formal nature are regular features of both Bangladesh Television and Radio Bangladesh. There is a special cell of educational broadcasting in Radio Bangladesh which produces some curriculum-based programmes for school students in collaboration with the teachers and the Ministry of Education. The programmes, mostly on science, language and co-curricular subjects, are broadcast daily in the

evening for half an hour except on Sundays. Non-formal education programmes in the areas of agriculture, rural development, population control and family planning, health and hygiene, religion etc. are also regularly broadcast from Radio Bangladesh. The programmes include lecture, discussion, interview, playlet, accompanied by popular songs.

ETV broadcasts include different areas of non-formal education, such as health education, agriculture, population education, etc. Regular educational programmes are also broadcast on music, popular science and general knowledge for the students.

With a view to facilitate quality teaching in the secondary schools the Government has taken up a pilot project on curriculum-based educational radio-broadcasting for speedy implementation. The project will be executed by the Ministry of Education in collaboration with Radio Bangladesh. An attached establishment of the Ministry of Education entitled "School Broadcasting Programme" with adequate numbers of full-time personnel will look after the implemention of the project. A well-equipped studio will be established under the project with necessary technical hands to produce curriculum-based programmes on languages, science, new mathematics and social studies. The programmes will be regularly broadcast from Radio Bangladesh, possibly through a different channel during school hours. Printed teacher's handbook and programme schedule will be sent to the schools well in advance.

1. Radio receiving sets and tape recorders will be supplied free of cost to the schools.
2. At least 2 teachers from each school will be given special training on the technology of utilizing radio broadcast and maintenance of equipment.
3. There will also be arrangements for a mobile van to assist school authorities in connection with the maintenance and repair of equipment, if and when necessary.
4. Adequate provisions will be made both for formative and summative evaluation of the project. 1,000 schools will be brought under the project initially.

The duration of the project will be three years, viz, from 1980 to 1982. If found fruitful after a thorough evaluation at the end of the project, other schools of the country will be brought under the project in phases.

The Government has already imported most of the equipment necessary for the project from abroad. Necessary staff are also being trained for the project. However, the task of full utilization of the educational broadcasting programme is a gigantic one in the context of Bangladesh and many other developing countries with their limited resources. So in addition to national assistance, international assistance, specially in connection with the training of personnel, will greatly facilitate project activities and assist the developing countries in realizing their goal.

INDIA

Organizational set-up

ALL INDIA RADIO and DOORDARSHAN (Television) are separate departments of the Ministry of Information and Broadcasting of the Union Government of India, each headed by a Director-General assisted by Deputy Directors-General and Directors/Controllers of programmes at the Headquarters at Delhi. There are 84 radio and 16 TV stations, each headed by a Director assisted by Assistant Station-Directors, producers and programme executives and scriptwriters. In the Radio Headquarters there are Chief and Deputy Chief producers to look after, on a nation-wide perspective, subjects like Education, Music, Drama, Spoken word etc.

Educational broadcasts are of the following kinds:

(1) Informal – for
- (a) Rural folk
- (b) Women
- (c) Children

		(d) Industrial Workers
		(e) Youth
		(f) General public
(2)	Formal – for	(a) Schools
		(b) Universities
		(c) Teachers
(3)	Non-Formal – for	(a) Children of age 6 – 14; and Adults of age 15 – 35
		(b) Farmers (receiving "Farm School on the Air" programmes).

All these broadcasts are planned in consultation with the user-departments and Ministries concerned in one way or another – such as Education and Culture, Health, Agriculture, Labour, Social Welfare etc.

Formal educational broadcasts are planned on the advice of State Education Departments through their Director, Institutes of Education, Institutes of Science Education, Institutes of English/Languages, Councils of Educational Research and Training and (recently) Educational Technology College – whichever agency is available in the areas. There are also statewise consultative panels to identify the needs of schools from the listening end, and subjects-committees to help in the actual planning of the programmes.

Surveys and evaluations are mainly done by the Audience Research officers of AIR and to some extent by the Centre for Educational Technology. The main feedback is from weekly and monthly responses from teachers and students.

Types of programmes (Educational)

1. **School Programmes**

These are done in 16 languages from 35 stations (relayed by another 25 stations) covering 22 states and union Territories and catering to the Higher Secondary, Secondary and Upper and Lower primary levels. The programmes for the secondary levels are mostly syllabus-oriented, whereas the primary school broadcasts are more flexible and are not tied to the syllabi.

2. **Broadcasts for Teachers**

These are meant to update the contents of the subjects they teach and orientate them to the changes of syllabi and methodology to be adopted.

There are also special services (in four stations) of Radio-cum-Correspondence Training for primary teachers to improve the teaching of Science and English.

3. **Non-Formal Educational Broadcasts**

These are now done from five stations and cater for rural youths in the evening classes. One of these caters for children of 6 – 14 age-group. These are mostly drop-outs and semi-literates and illiterates.

4. **Broadcasts for University Students**

There are two kinds: (1) General enrichment programmes which are not curriculum-oriented, and (2) Radio-support to correspondence degree courses of four universities, which are syllabus-based.

Future plans

Educational broadcasts are now being extended to 13 more stations. During the Sixth 5-year plan (1979 – 84), it has been proposed to extend the service to 21 more stations, in the interior, rural and tribal areas. The thrusts of the programmes in all these will be in support of universalisation of primary education and the National Adult Education project launched in October 1978. The scope and aim of the services will be designed to meet the local needs and environments. Already primary school curricula are being

renewed by Education Departments to make them relevant to the needs of localities, and broadcast support will reflect these changes.

INDONESIA

There are a number of Educational Radio Programmes for young people, women's groups, farmers and teachers in the rural areas. These programmes are under the management of various institutions like the Departments of Information, Agriculture, Education and Culture. The educational radio broadcasting programmes are under the management and coordination of the Department of Education and Culture and the Centre of Communication Technology for Education and Culture (PTKRK).

The PTKRK is a government institution in the Department of Education and Culture with the following tasks:

1. to place and prepare programmes of communication technology for education;
2. to execute production;
3. to evaluate results;
4. to supervise and coordinate the activities of Media Production Centers in the regions; and
5. to coordinate communication technology activities within and outside of the Department of Education and Culture.

In the capital city the PTKRK is equipped with these studios:

a) an audio studio;
b) a TV studio; and
c) a photo, film and graphic studio.

To be able to execute its project the PTKRK has 14 smaller working units called "Sanggar TKRK" in 14 provinces of the country.

Programmes produced

1. **Educational Radio Broadcasting for in-Service Teacher-Training Programme**

This covers 11 provinces, two of them in Java and nine in the outer islands for the purpose of supporting the Primary Education Development Project in carrying out its in-service teacher-training programme that began in 1977.

2. **Educational Radio Broadcasting for Out-of-School Youth**

Also began in 1977, this aims to support government efforts to fight illiteracy by providing printed materials to youths and adults who are deprived of the opportunity of formal education. This covers 13 provinces.

3. **Open Secondary School**

This is a government programme that began in 1979 in which regular school activities are carried out in the classrooms and students are also expected to study individually or in small groups outside the classrooms using modules, audio tapes, slide-tapes and radio programmes. They study three hours a day under the supervision of a tutor. Once a week they have to receive instruction from the subject matter teacher at home-base schools. Radio broadcasting becomes supportive.

4. **Open Learning**

Also began in 1979 this strategy is executed by using self-instructional modules, radio broadcasts, audio cassettes, slide tape programmes outside the classrooms. Face-to-face interactions between students and teachers are also possible through individual or small group consultations. Presently, this is offered to regular students taking Bahasa Indonesia, Science, Islamic Religion. It is expected that this will include many other subjects which will eventually be offered to teachers and other interested persons.

Utilization

Production, script-writing, audio-recording and try-out are done by the Department of Education and Culture. The Teacher-Training, Open Secondary School and the Out-of-School programmes are transmitted by the Department of Information and private agencies, while the Open Learning programmes are transmitted by the University transmitter and the management as well as the evaluation is done by personnel of the Department of Education and Culture and the Department of Information.

Problems

1. Lack of script-writers (these are people who work on part-time basis);
2. Lack of incentives on the part of personnel in the field;
3. Lack of evaluators; and
4. Lack of budget.

JAPAN

School broadcasting in Japan, counting from the start of radio school programmes, is 44 years old, and from the start of TV school programmes, it is 26 years old. For a long time, NHK (Nippon Hoso Kyokai: Japan Broadcasting Corporation) has been monopolizing the position for programme matters.

NHK became free of Ministry of Education and Ministry of Postal Services control in 1950.

Although NHK school broadcasting programmes continue to play their ever-important role in classroom TV or radio, programmes produced by local boards of education, and programmes produced by teacher-pupils within the school are playing an increasingly significant role.

School broadcasting for kindergarten, elementary school, middle school, high school, special education (mentally retarded and physically handicapped) school and for teacher training (only once a week for 25 minutes) are broadcast everyday from 9.00 a.m. to 4.30 p.m. (Saturday from 9.00 a.m. to 12.00 noon) except Sunday.

Number of NHK school broadcasting programmes in 1979/1980:

	TV	Radio
Elementary School	765	434
Middle School	523	247
High School	227	356

NHK educational broadcasting programmes for out-of-school audiences, particularly for housewives, elderly groups and working adolescents have also become more predominant.

Educational (School) broadcasting programmes are divided into three types:

(i) programmes that give life to "instantaneousness" on air, direct teaching programme;
(ii) programmes that aim to be "amplifiers for understanding". They may be used off-air, and are considered to be one of the elements of instructional media systems;
(iii) programmes that aim to provide a 'springboard' for further expansion courses. These programmes may emphasize image production, motivation for inquiry, divergent thinking, and affective responses.

School broadcasting will be combined with other educational media; multi-media systems may be developed in the near future.

Strategies and instruments for evaluating audio-visual literacy and individual differences of the pupil will be developed by many specialists – teachers joint-project teams.

MALAYSIA

Organizational set-up

The Educational Media Service Division, Ministry of Education, consists of four sections, viz. Educational TV Section, Educational Radio Section, Audio-Visual Aids Section and Administration Section. The three professional sections, viz. Educational TV, Educational Radio and Audi-Visual Aids, are integrated with the Administration Section which is responsible for day-to-day administration as well as activities pertaining to utilization and evaluation, printing, publication and other general services. The whole Division is headed by a Director who is responsible to the Director-General of Education.

The overall planning and policy-making for the EMS is vested in an Advisory Committee chaired by the Director-General of Education and with representatives from all the other 17 divisions in the Ministry of Education together with nominees from the Ministry of Information and Broadcasting, the Telecoms Department, the Treasury and the Economic Planning Unit of the Prime Minister's Department.

Educational TV

(a) **Staffing:**

The ETV Section at present has a staff of 120 and is divided into four units, viz. Production, Film and Photography, Graphics and Design, and Technical. The Technical Unit is manned by an Engineer and technicians from Radio/TV Malaysia (RTM), Ministry of Information and Broadcasting. All the professional posts in the other three units are held by officers in the Malaysian Education Service. All the officers were trained in their respective fields locally/overseas.

(b) **Programmes and Transmission:**

The programmes that are produced and telecast are as follows:–

Primary level:

National Language	–	Standards 3, 4, 5 and 6
English Language	–	Standards 4, 5 and 6
Science	–	Standards 4, 5 and 6
Mathematics	–	Standards 4, 5 and 6
Civics	–	Standards 4 – 6
History	–	Standards 4 and 5.

Secondary level:

Science	–	Forms I, II and III
Mathematics	–	Forms I, II and III
Commerce	–	Forms I, II and III
Civics	–	Forms I – III
Physics)		
Biology)	–	Forms VI
Chemistry)		

General:

Current Affairs	–	For pupils
World of Education	–	For teachers and parents

All the programmes, except English Language, are produced in the National Language.

They are recorded on 2" video tapes in TV Malaysia studios and are telecast on four days a week (Monday to Thursday) during the school terms (38 weeks) over the National TV network. The telecast hours are from 7.40 a.m. to 1.10 p.m. for the morning schools, and from 1.10 p.m. to 5.00 p.m. for the afternoon schools.

Programmes (Radio & TV) are relayed throughout the country by Micro-wave transmitters handled by the Department of Telecoms.

(c) **TV Sets and Generators:**

Since 1972, 5500 TV sets and 2500 generators have been distributed to schools in Peninsular Malaysia. For schools in Sabah and Sarawak the distribution of 2225 TV sets and 1662 generators is expected to be completed by the end of 1980.

Educational radio

The programmes produced and broadcast are in four languages, viz. the National Language, English, Chinese and Tamil. They cover subjects in humanities, i.e. Economics, General Paper, Geography, History, Islamic Studies, Languages, Literature and Music. Programmes are broadcast on four days a week (Monday to Thursday) and are transmitted through three Radio Malaysia networks, i.e. Blue Network for the National Schools, Green Network for the National Type (Chinese) Schools, and Red Network for the National Type (Tamil) Schools. The daily broadcast hours are as follows:–

Blue Network	–	0900 – 1300 hrs.
		1400 – 1700 hrs.
Green Network	–	0900 – 1000 hrs.
		1400 – 1500 hrs.
Red Network	–	1000 – 1100 hrs.
		1500 – 1600 hrs.

Besides the normal transmission during the school terms, special programmes are also broadcast for students and the public during the school holidays. These special programmes, such as Quiz for Schools, English Language (BBC recordings), etc. though somewhat entertaining, are nonetheless educationally biased.

All the programmes, except for the BBC English, are locally produced by producers drawn from the Malaysian Education Service and trained locally/overseas.

Problems

(a) **Production:**
- Lack of good script-writers
- Limited use of TV studio
- Physical separation of the various sections and units in different areas
- Loss of trained staff
- Negative/indifferent attitude of some teachers

(b) **Utilization & Evaluation:**
- Adjusting the pacing of programmes
- Adjusting school time-tables to broadcast time-table
- Scope and depth of in-service training for teachers
- To what extent the result of survey is reliable?
- Distribution of Teacher's Notes

Future plans

(a) Establishment of EMS complex complete with TV and Radio Studios
(b) Supply of Audio-Cassette recorders to schools
(c) Establishment of Media Resource Centres at district level
(d) VCR Project
(e) Production of teacher-training programmes (TV)

NEPAL

The Ministry of Education established a College of Education in 1959, and within it the Bureau of Adult Education was formed to provide a programme to achieve adult literacy by the use of broadcasting through Radio Nepal. The programme, which was in fact the introduction of adult education, was composed of 20-minute sessions which included discussion, magazine and information items, poems and songs as requested by listeners. The Government provided about 200 radio sets for use in adult literacy centres. Some of the personnel employed in the project were sent abroad for training.

Two years later the Ministry set up an Education Materials Centre, which included among its facilities a sound recording and radio unit. A weekly broadcast provided information about educational activities and development programmes initiated by the Government, and shortly after its inception the service was expanded to two programmes weekly.

By 1973 the effectivness of educational broadcasting was well proven, and the Ministry of Education appointed advisors to assist it in providing a school broadcasting service. Currently (i.e. in 1979) there are eight programmes, each of 30 minutes, transmitted each week and covering social studies, science teaching, Nepali and English languages, all directed to elementary school grades. In addition there are three general educational programmes per week. The Ministry provided over 500 radio sets to schools, and this number will be expanded to about 1000.

A new venture is the development by the Ministry of Training for Primary School Teachers, and the broadcasts will be prepared in collaboration with the Tribhuvan University.

Major reception problems occur in mountainous and remote areas where, although there is a need and a demand for educational broadcasting, it is often difficult for students to listen to the programmes. In addition to this, there are difficulties of providing receivers and in maintaining them where they are available – for example, climatic factors can seriously reduce battery life. Some research work is being undertaken in the use of solar cells as an energy source.

Communication with and between remote areas inhibits effective evaluation. There is also a lack of training facilities, especially in the utilization of programmes.

PAPUA NEW GUINEA

In Papua New Guinea the National Broadcasting Commission has set up an organisation to provide Schools Broadcast in the country. This section was set up in 1959 by the ABC and when the country became independent in 1975 the NBC assumed the responsibility through its "Education Section". It is staffed by people who have had teaching experience and have had some training in radio production and script writing in the NBC's training centre and who have had some training in Australia, Britain or New Zealand. The programmes produced are based on the Papua New Guinea school curriculum.

The programme content is decided by the "Schools Broadcast Advisory Committee" which meets twice a year to discuss changes in the schedule, evaluation of the programme, production of teachers' notes and other necessary materials for each series. The Committee is made up of educational personnel and National Broadcasting officers.

Education News

Education News is a weekly programme for teachers and other educated people. The materials for this programme are prepared by the Communication Branch of the Education Department which forms part of the Planning Services Division of the Ministry of Education. It is a current affairs programme in education and is broadcast to the country's 11,500 teachers and to interested citizens. This programme is broadcast in English over the national network. An officer works full-time in the Planning Services Division producing

materials for "Education News" broadcast and the programme has a wide following with the educated Papua New Guineans.

Most provincial radio stations broadcast at least one locally produced programme of education news each week. These programmes consist largely of service announcements and do not deal, in the main, with broad issues of education, and are prepared by school's inspectors and curriculum advisors of the provincial education offices.

Types of programmes produced

The programmes produced for schools range from Grade 1 to Grade 6 primary classes, all in English; Grades 4, 5 and 6 Social Studies, Science for Grade 6, a Science series for Grade 5, Health Education for Grades 5 and 6, Music (Papa Mai) programme for Grades 5 and 6, Christian education for Grades 5 and 6 and a weekly current affairs programme for Grades 5 and 6. A weekly quiz programme for Grade 10 Secondary Schools is transmitted on Sunday night. Broadcasts for correspondence pupils are still being piloted in the country.

Future plans

The future plans in radio schools broadcast are:

* to up-date some old broadcast programmes, such as Science etc.;
* to introduce new programmes, such as mathematics;
* to develop programmes for correspondence school students;
* to hand over the production and distribution of teachers' notes to the Education Department so that programme producers will concentrate on programme and script writing;
* to train more script writers (at present many script writers are still being hired from Australia etc.);
* to let Education News continue to play a major role in making known to the teachers and other community leaders the policy that the Government is pursuing, for example, the universalization of primary education. The Department of Education recognizes that educational policies will not succeed unless they are understood and supported by the people. Education News is a vital part of the process of public awareness.

PHILIPPINES

Organisational set-up

Educational broadcasting in this country is known as the LINGAP NG PANGULO SA BARANGAY, which means 'The President's Concern for the Barangays'. It is the first integrated educational broadcast accentuating the different developmental programmes of the Government to improve the quality of life of the people, particularly in rural areas.

The Office of the President is the over-all co-ordinator and the lead ministries and agencies (government as well as private) were directed to implement the programme on a national scale. To oversee the implementation of the project, a sub-cabinet headed by the Deputy Minister of Education and Culture in charge of non-formal education was established. The following functional committees were organized.

A. **National Coordinating Committee**

The Sub-Cabinet Committee members composed this committee headed by the Political Deputy Minister of the Ministry of Education and Culture, who is also in charge of non-formal education. The other members are the Deputy Ministers of the Ministries of Local Government and Development, Social Services and Development, Health, Agrarian Reform, and Natural Resources and the Director of the National Media Production Center.

B. Regional Coordinating Committee

The committee is composed of Presidential Regional Officers for Development (PROD), Regional Directors of various government agencies and representatives from NMPC, MPI, KBP, Association of Barangay Captains and KB Federations. The PROD heads this committee.

C. Provincial/City Coordinating Committee

The Committee is composed of Governors, City Mayors, Superintendents, Heads of Offices, Division/District Coordinators, government/private agencies involved in "Lingap" and other representatives appointed by the Governors/ City Mayors who act as chairman of this committee.

D. Barangay Coordinating Committee

The Committee is composed of Barangay Captains, KB (Babatanng Barangay) Chairmen, councilmen and other school as well as community authorities. The BC (Barangay Captain) heads this committee.

In Iriga City, Region V (Bicol), where this "Lingap Ng Pangulo Sa Barangay" has been found to be very workable, another committee has been organised, called the School NFE Coordinators' and Instructors' League composed of all coordinators in 38 public schools and five private schools and universities. To oversee the implementation, district coordinators have been appointed for the two public school districts and one for the private schools. The Assistant Schools Division Superintendent of the city is the over-all coordinator while the Division Supervisor for Non-Formal Education is the action officer. The City Mayor and the Schools Division Superintendent are the chairman and vice-chairman, respectively, of the Iriga City NFE Coordinating Council and the Mayor's representative is the chairman of the Working Committee.

Types of programmes produced

The programmes produced are regionalized and flexible, utilizing varied approaches with various themes: human resources, farm and home technologies, community development, nutrition, health services, environmental education and other developmental programmes linked with the immediate basic needs of man. Although such programmes are intended for youths aged 7 - 14 and adults 15 - 35, composed of farmers, fishermen, housewives and workers, they are also for general consumption, especially in promoting desired attitudes and in motivating the people towards group and individual action.

Teacher-training programmes for script writing are conducted and frequent meetings are held at the regional level by the teams from the Lingap Operations Center. This training lasts for about two to three weeks and includes identification of target audience so that needed subject matter can be aired.

Educational broadcasting in the classroom has existed for quite a long time especially in the urban areas. However, believing that classroom instruction has been taken care of in the formal system, the educational broadcast has been designed to cater to the greatest bulk of the Philippine population who are in the rural areas and who are in the vantage position to wage rural and community improvement efforts through their willingness, interest and enthusiasm, and to participate actively in the government's developmental programmes. So the Government is now shifting the priority of the target audience from the children in the formal classroom to the youths and adults who do not have the opportunity for formal schooling.

Future plans

The Office of Non-Formal Education will strengthen this "Lingap Ng Pangulo Sa Barangay" through the following:

1) Establishing closer linkages with government agencies and private sectors;
2) Conducting massive training programme for implementation;
3) Producing and distributing information handbooks;
4) Improving the broadcast format and widening of broadcast coverage;
5) Rationalizing feedbacks and procedures;
6) Modernization of communications equipment; and
7) Utilization of other media.

REPUBLIC OF KOREA

Types of educational broadcast:

(a) Radio School Broadcasting for Elementary Schools
(b) Air and Correspondence High School
(c) Air and Correspondence Junior College
(d) Educational TV.

(a) **For Radio School Broadcasting for Elementary Schools** the programmes are produced by KEDI (Korean Educational Development Institute) and are transmitted through KBS (Korean Broadcasting System) channel.

(i) Programmes:

Instructional:	Moral Education, Korean Language, Social Studies, Korean History, Music (53%)
Supplementary:	Creative Writing, World Travel, Health Education, Music Appreciation, Science, Special Activities (28%)
Foreign Language:	English for Junior High School (8%)
Others:	(11%)

The length of each programme ranges from 15 to 30 minutes. The programmes are broadcast for 3 hours a day. Approximately 3000 programmes are produced and broadcast annually.

(ii) Utilization:

The way radio programmes are used varies from school to school. Some schools tape the programmes while on the air for later use, others utilize them as they are broadcast, while others use their amplifier system in order to utilize each programme for one whole grade at one time.

(iii) Problems:

Teachers' negative attitude
Adjustment of pacing
Adjustment of broadcast time-table to school time-tables
Lack of qualified educators and producers
Lack of coordination among the various agencies concerned, i.e. Ministry of Education (Curriculum), Ministry of Communication (Frequency), Ministry of Culture and Information (Broadcasting).

(b) **Air and Correspondence High School**

The purpose is to provide secondary education to vouths who are unable to receive High School education after finishing Middle School.

The school is operated under a close coordination between the Ministry of Education, KEDI, Regional Board of Education and individual High Schools. The Ministry of Education is responsible for basic policies, curriculum development, approving of text

books and schools, and supervision of financial support. The Regional Board of Education is responsible for direct supervision of schools, selection of schools, and allocating students to the approved High Schools. KEDI provides text books, radio programmes and test materials. Each one of the schools (9 in Seoul and 33 in other cities) is responsible for conducting classroom teaching, evaluation, attendance, etc. The total number of students is about 3000. Courses are conducted in the following manner:

(i) Guide for self-study.
(ii) Radio broadcast.
(iii) Attending High School for 26 days per year.
(iv) Submitting assignment by mail.

The radio programmes are broadcast 313 days per school year – 30 minutes a day in which two lessons are broadcast.

(c) **Air and Correspondence Junior College**

The College is attached to Seoul National University for the purpose of providing an opportunity to get college/university education for adults who could not continue their education to such a level.

Courses are conducted in the following major areas:

Home Economics
Business Management
Agriculture
Elementary Education
Public Administration

Radio lectures, each lasting 15 minutes, are broadcast twice a day.

(d) **Educational TV**

KBS started the service with the co-operation of Central Audio-Visual Centre in 1969. The programmes produced and telecast were Social Studies, Science, Music and Fine Arts for Upper Elementary and Junior High Schools. However, owing to administrative and financial difficulties, the service was discontinued in 1973.

In 1972 KEDI was established and started to produce 1500 programmes for the teaching of Korean Language, Social Studies, Music, Art, Moral Education, Arithmetic, Science and Physical Education. Teacher-training programmes were also produced. However, KEDI's TCOM transmission system failed in its experiments. The programmes produced, therefore, would be used only as educational materials in classrooms. The Ministry of Education has selected 85 Elementary Schools in the remote areas. These schools will be provided with VCR's to enable them to utilize the programmes as from the beginning of fiscal year 1980.

KEDI is planning to carry out in 1980 a research in instructional Radio and TV and the results will be used as a basis for planning a more successful media service.

SINGAPORE

Institutions involved in educational broadcasting

As early as 1946, there was a small educational radio service in Singapore which was operated by the Ministry of Culture. However, this educational radio service was discontinued in 1956 after its programmes did not capture the imagination of the teachers and the pupils for whom these broadcasts were designed.

In 1966, the Singapore Government decided that an Educational Television Service was to be set up to use the television medium for the improvement of quality and the universalization of education. This first educational television programme in Singapore was transmitted over Channel 8 of Radio and Television Singapore on January 30, 1976, the date of the official opening of Singapore ETV Service by the Minister for Education. In

April 1973, Singapore Educational Media Service (SEMS) was established, integrating the Singapore ETV Service and the Audio-Visual Section of the Ministry of Education. The functions of SEMS have expanded from the production of educational television programmes to include an advisory role in the utilization and the development of audio-visual media programmes in schools and the production of audio-visual materials. SEMS is spearheading the use of audio-visual instructional materials in schools throughout Singapore.

Types of programmes produced

In order to develop into a comprehensive resource centre of all forms of instructional materials related to the school curriculum, SEMS has produced media materials for primary and secondary schools from primary one to pre-university classes. There are instructional media materials in English, Chinese, Malay and Tamil to cater for Singapore's multi-lingual and multi-cultural society.

For the coming year, 1980, SEMS will be transmitting the following series of programmes for the primary schools:

1) An English Language series and a Chinese Language series for Pr. 1;
2) An English Language series and a Chinese Language series for Pr. 2;
3) An English Language series for Pr. 3;
4) Nine General Education series in Chinese, Malay or Tamil for Pr. 3, 4 and 5;
5) A Science series and a Mathematics series for Pr. 4;
6) A Science series and a Mathematics series for Pr. 5;
7) A General Education series in Chinese for Pr. 6.

For the secondary students, SEMS will be transmitting 10 series of programmes for them. Secondary I students can view the following series:

1) An English as a second language series;
2) A Reading series in Chinese;
3) A series of stories in Chinese;
4) A Science series in English;
5) A Chinese as a second language series.

The following 3 series are for the Secondary 2 students:

1) An English language series;
2) A Science series in English;
3) A Chinese as a second language series.

SEMS will also be transmitting an English language series for the Secondary 3 students. Our Pre-University students have a specially tailored series to help them in 'General Paper', a subject which they will have to sit for in their G.C.E. 'A' level examination.

Besides producing educational television programmes to complement classroom teaching, SEMS has also made programmes to help explain major educational policy changes and to demonstrate the latest teaching techniques to the Republic's teachers. Programmes from SEMS reflect the new pedagogical thinking and help spearhead the introduction of new curriculum materials and practices.

SRI LANKA

Organizational set-up

All radio broadcasting in Sri Lanka is done by the State Broadcasting Corporation (S.L.B.C.) which has a special division called the Education Service Division to handle educational broadcasts. A joint committee comprising of Ministry of Education and S.L.B.C. officials lay down policy matters and priorities relating to educational broadcasts.

Subject sub-committees at the Curriculum Development Division of the Ministry of Education assist the producers and script-writers in selecting topics and content of programmes to ensure their relevance to syllabus requirements and grade level. The Education Service Division of S.L.B.C., in collaboration with the External Service Agency and the Sri Lanka Institute of Distant Education, have also launched "The University of the Air" programme for those seeking out-of-school educational opportunities beyond the Senior Secondary level.

Programmes produced

All programmes produced for schools are based on the school syllabi and they are accompanied by support materials. The programmes are in the following subject areas:

(i) Primary School (Grades 1-5)
- Music and Movement
- English Language (Grades 3-5)

(ii) Junior Secondary School (Grades 6-10)
- First Language
- Second Language (English)
- Mathematics
- Science
- Social Studies

(iii) General Programmes (Out-of-School)
- Link Language (Sinhala/Tamil)

The External Service Agency runs a series of courses supplemented by Radio Lectures in Economics, Sinhala, Political Science, History and Law.

The Institute of Distant Education has planned a series of radio broadcasts in the following subject areas to supplement their correspondence courses:
- Mathematics
- Management
- Science
- Electronics
- Telecommunication
- English

Radio receivers and transmission

At present only about 1,500 out of about 9,000 schools are equipped with receivers.

All in-school broadcasts are transmitted over the medium wave which now has island-wide coverage. Morning transmission covers 4 hours per day and about 60 programmes (30 series) are transmitted per week - including repeats. Evening transmission (pre-broadcasts to teachers) is spread over 2 hours.

Problems

Some of the significant problems in the field of educational broadcasting are:
- Lack of resource materials
- Shortage of air-time
- Lack of training facilities for script-writers
- Feed-back and evaluation mechanism
- Increasing cost of support materials.

Future plans

(i) 2,500 more radio receivers will be distributed to schools in 1980;
(ii) Starting of a series of non-formal education programmes in 1980; and
(iii) Starting of Educational TV within the next two years.

THAILAND

Organizational set-up

Educational radio broadcasting in Thailand is handled by a number of agencies. The main agency, the Ministry of Education, is responsible for school broadcasting for primary and secondary schools, a general educational service, a radio correspondence project for adult education and an in-service teacher-training programme through radio and correspondence. Within the Ministry of Education the responsibility of school broadcasting and the general informal education service falls on the Centre for Educational Technology, Department of Non-formal Education. The radio correspondence project is handled by the Operation Division of the same Department; while the In-service Teacher-Training by Radio Correspondence is the responsibility of the Teacher Training Department. Outside the Ministry of Education, at the tertiary level, one on-going university, namely, Ramkamhaeng University, uses radio for instructional purposes to a large extent, and another institution, the new "Open University" by the name of Sukhothai Dharmadhiraj University, has plans to use both radio and TV broadcasts when it becomes operational next year. In addition, other government agencies concerned with various aspects of development, such as the Ministries of Agriculture and of Public Health, organize programmes to support their extension programmes.

Transmission

Although all radio stations, of which there are over two hundred, in Thailand, are in theory owned by Government agencies, in practice most of them are operated commercially. Among the few non-commercial stations are the Radio Thailand Networks and the Ministry of Education's own station and it is these stations that carry most of the educational programmes. The Ministry's Educational Broadcasting Station, a 10kw. station situated in Bangkok and run by the Centre for Educational Technology, transmits the school programmes every week day during term time from 8.45 – 14.45 hours, and the general education service from Monday to Friday from 1500 – 2200 hours. School programmes are broadcast by 22 regional and provincial stations to accommodate those schools that fall outside the Educational Broadcasting Station's catchment area. The Radio Correspondence Project for adults makes use of air time on Radio Thailand regional stations, and Ramkamhaeng University transmits its programmes on Radio Thailand Second Programme from Bangkok.

Production of programmes

Up to now, the Centre for Educational Technology is the only agency engaged in broadcasting educational programmes which has its own production facilities. The Centre is responsible for curriculum development, programme planning and production, support material production and distribution, in-service teacher-training in utilization, supervision and evaluation. At present, programmes which are of the supplementary type, are offered in such subject areas: English language, Music and Singing, Thai language and Social Studies. The Radio Correspondence Project, for youths and adults who have had little or no access to formal education, covers three main areas: functional literacy, interest group and functional "second chance" education.

Future plans

Under the IDA Multi-purpose Education, the Government, through the Public Relations Department, will establish a new radio network which will ensure good reception in at least 90% of the country's populated area. This network will be used exclusively for the transmission of educational programmes. Its air-time, estimated to be 18 hours a day, will be shared between CET (for in-school transmission), Radio Correspondence Project, In-service Teacher Training Programme, Sukhothai Dharmadhiraj University and other developmental agencies. The new network is expected to be operational in 1983. In the meantime, the Centre for Educational Technology will strengthen its operation by

constructing and equipping a new production and training complex and by experimenting with new programme formats and new strategies in utilization and evaluation. As part of the radio component of the IDA Project, the Centre of Educational Technology has also started an experimental programme of direct teaching by radio to provide basic skills in mathematics and Thai language for Primary grades 1 – 4. The experiment is designed to test the possibility of a more effective use of radio in schools. For the mathematics programme, CET is making use of materials from the Nicaragua Radio Mathematics Project and is receiving technical assistance from Stanford University funded by USAID. Formative and summative evaluation procedures are built into the project and this includes classroom observation, field testing, pre-tests, achievement tests and matched experimental and controlled groups.

The fact that both the Government and the World Bank have concurred with the view that investment of this magnitude should be made to establish a nation-wide network for educational broadcasting and to equip every school with receivers testifies to the recognition of the important role of the radio in educational development. It is the hope of those concerned with the project that their faith in the radio will be fully justified and that the five years of project implementation will shed useful lights on those areas in educational radio broadcasting which still need to be illuminated.

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CHAPTER III

COMMON PROBLEMS, ISSUES, TRENDS AND TRAINING NEEDS

Introduction

The identification and definition of problems associated with the effective planning, production, distribution, utilization and evaluation of educational radio and television programmes in member countries were undertaken by two discussion groups. The discussion was then continued in plenary session, and it was established that there was substantial agreement between the two groups as to the location and nature of impediments to the maximising of the advantages to education through the broadcasting medium.

No particular difficulty can be assumed to be present in every country, and there are variations in degree of problems as they are manifested; however, each of those identified occurs with such a commonality that nothing would be gained by describing it in terms of the educational broadcasting system of a particular country. Consequently, none of the comments which are offered have been identified with the needs and/or the practices of individual member countries.

There was agreement that several trends were appearing which would indicate that educational broadcasting is approaching a critical stage in its evolution, and that their identification could provide a context within which an examination of the nature and development of broadcasting may be seen with greater clarity. Among those trends are:

* a shift away from an emphasis on in-school broadcasting to a recognition of the need for more substantial provision of out-of-school, or non-formal, programmes;
* an increasing need, because of the broadening of the criteria for the selection of target audiences and the changing objectives of the education process, for the control of school and non-formal educational broadcasting programmes which must be closely identified with the educational system they support;
* the recognition that competition with other interests for air-time, and the non-availability of transmitters for educational purposes, may in some instances cause educators to seek other means of programme dissemination;
* there is an increasing awareness among educators of critical shortages of trained personnel with appropriate expertise in a number of inter-related areas, and also of the insufficiency of training programmes/ institutions to overcome these deficiencies.

Administration and management

In many cases, educational broadcast services are administered and managed by successful practitioners of educational media, either in its theory or in its application. Although there is consensus that the practice of promoting successful professional people to the management of total services should be maintained since it contains many advantages, especially for the planning process and in quality control of output, there are several implicit disadvantages, or inherent problems. They are:

* the services of the most competent people are less directly available at the work phase;
* increasingly, the people so promoted are separated from developing techniques and changing perceptions of the enterprise;
* generally, they are not possessed of the precise administrative and managerial skills necessary to the successful conduct of an overall organization.

Production

The production of educational broadcasts – and no distinction is made between radio and television – calls for a number of talents, skills and competencies in each of a range of worker-categories. The seminar identified many of the deficiencies that exist among member countries, and in the statement that follows it is emphasised that the list is by no means exhaustive or even comprehensive. Those difficulties which are drawn to attention are those which are giving immediate concern to a number of countries, and are seen to be important factors in any reduction of the effectiveness of educational broadcast programmes that may be occurring.

* Script Writers

  Of all categories, it appears that the greatest need is for competent script writers and for training courses to develop these specialised skills which include not only the craft of writing but an intimate understanding of the techniques of the media for which the script is being prepared, the proper appreciation of the educational objectives of the particular programme, its context of use and target audience, and a knowledge of the subject matter sufficient to ensure an accurate presentation of the instructional content. It was agreed that teachers, no matter how experienced or knowledgeable in particular subject areas, are not necessarily able to write effective scripts, and that there will be a growing need to encourage competent people to develop as professional script writers specialising in educational media.

* Producers

  The lack of qualified and trained producers is another handicap identified generally by all countries participating in the seminar. Wherever there are trained and experienced producers, the development of broadcasting is limited either because there are not enough producers to handle the quantity of work or because the organisation is reluctant to expand its services beyond the capacity of the existing production staff. Recruitment is difficult since the size of the pool of potential producers is severely restricted because of the limited opportunities which are available for entry into the profession, and because of the inadequate number of training programmes and facilities which are available to member countries. Current programmes are hampered, and perhaps do not achieve their objectives, when their producers have such a work-load that the time available for planning and broadcast design is reduced.

* Technical Support Staff

  Several countries met with some difficulty in maintaining output because of:

  – insufficient numbers of studio support staff, including recordists and maintenance technicians;
  – inadequate studio space and equipment, causing overloading of the available facilities and a consequent lack of time to carry out preventive maintenance;
  – limited opportunities for the training of staff and for their up-dating in new technologies;
  – delays in feedback of programme evaluation, and/or insufficient resources for continuing programme monitoring.

Utilization

Without exception, participant countries expressed concern that there was less than optimum usage of the broadcast resource by educators. It is noteworthy that the difficulty is manifested more in formal school situations than it is in relation to out-of-school groups to whom specific programmes are directed.

The major obstacles to effective utilization are:

* negative attitudes of many school administrators and teachers, who see the use of media resources, including broadcasting, as an admission of their own professional incompetence;
* only marginally effective pre-service training in educational technology at teacher training institutions;
* insufficient in-service training, especially in rural and remote areas;
* insufficient numbers of trained and experienced personnel to develop pre-service and in-service programmes;
* the failure of educational policy makers and administrators to understand the nature of the systems-approaches to learning difficulties which are offered by an integrated educational technology;
* the difficulties of providing pre-broadcast information and other support materials to all teachers because of:
  - lack of support staff to write the information;
  - lack of facilities and resources for its publication;
  - distribution problems caused by great distances, inaccessible terrain and under-developed communication routes;
* insufficient receivers in schools, causing:
  - many teachers to be denied access to the broadcasts;
  - difficulties in synchronizing the classroom time-table with the broadcast schedule;
* low signal strengths, interference due to terrain and climate, and other technical problems make reception uncertain in many areas;
* the almost total non-existence of school equipment maintenance programmes, and extreme difficulty in obtaining such elementary components as batteries;
* complete lack of training facilities for maintenance personnel;
* lack of funds necessary to implement reform programmes for any of these problems.

Evaluation

The participants acknowledged that the continuing and successful development of educational broadcasting is dependent on the constant and objective evaluation of the programmes offered, in respect to their relevance to the needs of the target audience, the particular subject syllabus, their quality of scripting and production, and the manner of classroom utilization. It is a critical necessity that evaluative data be fed back to the planners and producers to ensure effective long and short-term planning, and to allow for adjustments to scripting and production techniques. Evaluative data is also essential to monitor the acquisition, maintenance and usage of equipment, and to provide the information for efficient cost analysis techniques to be applied at all stages of the production and dissemination systems.

It was also agreed that present evaluation machinery falls short in meeting the requirements of participant countries – specifically, the following deficiencies were noted:

* in many cases, objectives are not stated with sufficient clarity for measuring machinery to be designed;
* there are few effective models of successful evaluation which can be applied to the general and particular needs of member countries;
* there are few trained research personnel available in any country;
* similarly, there are very few trained clerical staff who could process the data collected in research;

* training facilities and programmes for research personnel are, for practical purposes, non-existent;
* few countries, because of the costs, can afford to allocate resources for evaluation;
* difficulties of communication inhibit the mounting of evaluative programmes.

Training needs

The participants considered the training needs under several headings which had emerged from the discussion about the problems faced by member countries in the development and utilization of educational broadcasting. The categories were broadly defined under the headings:

* Organization and management
* Broadcast design and production
* Technical services
* Utilization
* Evaluation

Organization and management

(a) The identification of problems associated with the organization and management of educational broadcasting systems was expanded to a number of sub-categories, such as those associated with the administrative processes of:

* research and planning;
* budget management, including cost estimates and analysis;
* personnel management, including recruitment and training;
* secretarial and clerical services;
* buildings and plant;
* equipment selection, maintenance and replacement;
* stores management.

(b) Of importance, too, are aspects of resource management, and those of major significance include the need to develop proficiency in the total management of an INFORMATION SYSTEM, of which the components include:

* the establishment and maintenance of efficient communication between broadcasters and users;
* provision of adequate support services;
* information storage and retrieval.

(c) It was also agreed that management and administrative skills must be developed at several levels of any organization and not confined to the higher levels of responsibility.

(d) The participants observed that there is a need to develop objective criteria by which national priorities in the allocation of air-time to education can be determined, and consequently a need to educate political leaders and departmental administrators in the philosophy and practice of media instruction.

Broadcast design and production

The requirements for training in the general area of production spread across a broad complex of needs, which were previously identified when the difficulties experienced by particular countries were described. There are many considerations to be taken into account when training programmes are being planned and implemented, and their variety in both subject and degree prevent the formulation of a worthwhile generalised statement. Some of these factors are:

* national policies of social, industrial and economic development;
* national educational objectives, and the degree to which these may be modified at regional levels;
* the forms of organisation and control of the education system;
* the forms of organisation and control of the broadcasting system;
* the inter-relationship between the education and broadcasting systems;
* the level of sophistication achieved by the broadcasting system;
* the financial and other resources available to educational broadcasting.

There are, however, common needs which have been identified as problem areas, and these can be particularised into categories of workers, particularly:

* script-writers;
* training for planning and management of educational broadcasting;
* producers;
* educational broadcasters from the Ministry of Education;
* artists;
* training for trainers;
* "talent" or other presenters;
* advanced training needs in graphics and designing.

In these categories, it is essential that training should go further than meeting immediate needs, so that a pool of proficient personnel is available for recruitment.

Non-formal education design

Within the growth of the concept of non-formal education and adult education in the face of an appalling amount of illiteracy and consequent need for understanding local cultures and idioms, there is a very special need for training personnel in a total perspective of non-formal education. While special training is needed for script-writing, production, interviewing, etc., a special training in total perspective will be very desirable in this connection.

Technical services

The broadcasting component of educational services appears to be reasonably well provided with efficient technical personnel, but the same is not true of maintenance required for school equipment. There is a need for:

* the training of teachers and school administrators in the selection and care of receivers and allied apparatus;
* the training of technical personnel to undertake the repair and general maintenance of school equipment.

Utilization

All countries reported serious deficiencies in teacher usage of media programmes, and in all cases these were ascribed to a lack of training facilities and programmes in both the pre-service and in-service situations. It is essential that teacher training institutions should include media usage as a compulsory and significant component of their overall curricula, and that education systems provide adequate resources for the continuing and regular in-service training in media of service teachers and school administrators.

Evaluation

Similarly, few resources are available to the countries to undertake scientific research into the efficacy of the broadcast programmes directed to schools, the identification

of programme needs, and the attitudes of teachers and students to the available output. Such research is essential for effective and economic programme planning and production, and to provide information for the design and methodology of teacher-training courses. This, therefore, implies the need for selecting very specially qualified persons like sociologists so that they can have a full understanding of the needs and conditions of the target audience and also of the production end.

Methods of training

The first essential in developing good training programmes is to identify the target-personnel (need-based design), and this the seminar has attempted above.

The second essential is to provide objectives for the individual training programme, and no generalisations can be offered. However, guidelines can be developed, and this is attempted at a later stage of this report.

The third stage is reached in the selection of an appropriate and practical strategy. Those which should be considered are:

* institutional training and re-training for particular categories and at a pre-service level; for example, teachers and technicians;
* regular in-service training programmes conducted by the home-country using its own resources but supported financially wherever necessary from external sources;
* training programmes organised by the home-country but supported by the expertise of other member countries and from more developed countries;
* provision of opportunities for key personnel at all levels and categories to work in advanced systems for appropriate periods of time with the purpose of widening professional knowledge and experience;
* financial support to developing countries to allow them to pay fees adequate to attract and encourage talented people to enter training programmes;
* exchange of information between countries and involved organisations;
* development of advisory councils within the countries to overview and advise on problems of personnel recruitment, training and re-training programmes.

CHAPTER IV

GUIDELINES FOR THE PRODUCTION, UTILIZATION AND EVALUATION OF EUCATIONAL RADIO/TV PROGRAMMES AND TRAINING

In formulating guidelines for the development of educational broadcasting services which may provide useful advice to the governments of member countries either in the further development of existing services or as a base for initiation, the participants were conscious of several factors:

* guidelines should have application to the universalisation of education and the special needs of rural communities;
* there is a great variety of administrative patterns and in the stages of development in educational broadcasting among member countries;
* advice should be practical of implementation, and should have a proper regard for limits of financial and other resources;
* radio is a cheaper form of broadcasting than television, both in the production and transmission of programmes and in the facilities required for reception. It has the advantage of greater penetration of the general population;
* notwithstanding the previous statement, television is a powerful educational tool and must be given full consideration by governments and ministry policy-makers when determining priorities for the allocation of resources.

Because of these considerations, the Meeting presents its guidelines either as general principles or as specific statements, with the understanding that not all of them are applicable to any one country or educational system.

A. Policy making and management

1. Universalization of education as a concept has two functions:
   * to provide a basic instructional programme to reduce illiteracy which results from lack of formal educational facilities;
   * to ensure that educational opportunity is not restricted by factors of poverty, population distribution, racial origin or geography; in particular, to extend to the rural population those educational experiences which are available in urban areas.
2. Educational inequality is a problem present in all countries, although to varying degrees, and in several developing countries to such an extent that it prevents, limits or inhibits economic, social and cultural development. It contributes to the widening cultural gap between rural and urban communities.
3. The potential of educational broadcasting services to reduce illiteracy and educational inequality is dependent on many variables, some of which may not be isolated or even identified. Consequently, decisions as to its utilization can be made by governments only when its possiblilities are measured against those of more conventional educational enterprises. Consequently, the Meeting cannot provide a blue-print for the installation and continuing development of educational broadcasting for any particular country - its findings must be generalised.
4. However, the participants state unequivocally that an education broadcasting service will contribute to the well-being of any country, and are of the unanimous opinion that the planning and production of programmes must be located within the authority responsible for the nation's schooling.
5. It is equally important that, within the framework of the developmental policies of the nation as a whole, the identification of target audiences, the determination of syllabuses and programme content, and the provision of support services

should be the responsibility of the educational authority, working with the advice and co-operation of relevant government agencies, community leaders, and other educators and communication experts.

6. The participants believed that for most developing countries the first priority of an educational broadcast service should lie in community education in such areas as social development, health, functional literacy, etc.
7. In developing a service, governments should be aware that the nature of broadcasting has an inherent disadvantage in that it carries a uniform message to all people. Consequently, it is essential that educational broadcasting should take cognisance of localised needs, differences in language and culture and other similar phenomena, and be so organised that it can be regionalised and even localised. Regional stations may need to have a great deal of planning autonomy, and to be provided with personnel who can identify with the local population, be perceptive of their needs and compose programmes best suited to meeting those needs. It must not be overlooked, however, that broadcasting can present vicarious experience and is therefore a powerful tool in broadening the horizons of isolated people.
8. National resources should be used to the full, and therefore consideration should be given to making school buildings and equipment available to the community for educational purposes. Wherever possible, formal (i.e. school) broadcasts should be developed concurrently with non-formal (i.e. adult and extension) programmes, and the transmission schedules so organised to take maximum advantage of transmission and reception facilities.

B. **Planning and production of programmes**

I. The planning of programmes and the determination of their contents is a function of educators.

1. It is essential that all personnel concerned with production:
   * are adequately trained before recruitment;
   * are subjected to regular in-service training;
   * have opportunities for broader experience in other organisations.
2. Production personnel should participate in the planning process with all relevant authorities and agencies.
3. Production personnel should be assured of continuing feedback as to the success of programmes in all their aspects.
4. Production personnel should be closely associated with the selection of studio equipment and personnel, and with the distribution of programmes.
5. Production personnel should be closely associated with the provision of supporting materials and services.
6. Production personnel should have a background of educational qualification and experience, preferably within the system to which programmes are directed.
7. Production personnel should be recruited from the home country, since it is imperative that the programmes identify with the culture of the people.
8. The quality and quantity of programme output are directly related to the availability of competent production staff, and therefore staff-establishment should be of such a scale that optimum efficiency is assured.

II. Who should plan the production output?

1. Planning for programme output should be a co-operative function, involving the participation of educators, such as curriculum developers, subject specialists and practising teachers, and of broadcast production personnel, such as producers and script-writers.

2. Planning should cover the determination of objectives and guidelines for the design of the programme.

3. The development and production of particular programmes are the professional responsibility of the producer, supported by educational consultants as required. It is his/her prerogative to brief the script-writer, and guide him/her to providing a suitable script.

4. Scripts for instructional programmes should be prepared by experienced teachers or people with particular subject expertise who have been trained in script-writing.

5. Professionally trained producers, trained in co-ordinating the creative and technical resources of broadcasting and the ability to relate to the cultural background and age level of his target audience, are essential to effective educational services. The seminar firmly believes that it is not possible to substitute for this professionalism from other areas of expertise, including teaching.

6. The producer must be supplied with and have control over a number of studio support services. These would vary according to the nature of the programme, but may include:

   (a) technical studio personnel;
   (b) graphics and design;
   (c) field cameramen and sound recordists;
   (d) visual and/or sound editing;
   (e) recordists and sound mixers;
   (f) monitoring.

7. For educational film and television, the precision and quality of graphics is critical to a successful production. It is essential that graphic artists should:

   * be talented artists;
   * be familiar with the subject area and its educational content;
   * have expertise in the techniques and requirements of the medium.

   It is also necessary that pre-service and in-service training facilities should be available for their development. Training should cover sophisticated skills, such as animation, puppetry and three-dimensional model making.

8. Effective on-air presentation of educational programmes is often dependent not only on the confidence of the "presenter" in the subject area, but also on particular skills of communication, on personality and on audience appeal. These qualities need development, whether the selected person is a teacher or not, and this implies the need for careful selection, expert support of the producer and coaching through adequate rehearsal. There are many occasions in which a professional compere may be preferred in either radio or TV programmes.

9. For those programmes which use a drama format, it is desirable that producers should have access to a pool of professional actors/actresses. It may be necessary to provide training facilities to achieve this.

10. The skills required of a radio producer substantially differ from those for television, and this must be recognised. Each should experience training programmes which are specific to the particular medium in which he works, and he must be given the appropriate support facilities.

11. Similarly, in the planning of broadcast programmes, the planners must be conscious of the techniques and particular advantages attached to the medium to be used as appropriate to the subjects.

12. There are certain areas of non-formal education where a specialised producer, not normally employed in the educational service, is required. This factor should be recognised, especially in several disciplines, such as farming techniques, where the

research and presentation may also be the responsibility of the producer.

C. **Utilization of programmes**

To ensure effective utilisation of educational broadcast programmes, it is essential that:

* teachers are adequately trained in methods of integrating the programmes with their overall learning schedules;
* teachers are provided, well in advance of transmission date, the objectives and a contents summary of each broadcast;
* teachers are informed of the types and availability of support materials;
* programmes are monitored for their educational efficacy;
* efficient receiving equipment is available to the individual teacher, and it is maintained in optimum operating condition.

To achieve these objectives, guidelines are formulated for the advice of governments and responsible agencies concerning:

i) **Teachers**

* Pre-service education of teachers in media utilization, including broadcasting, is an essential component of teacher-training. Education authorities should ensure that it occupies a significant part of the training syllabus.
* Continuing in-service training is also essential. To provide an effective service:
  - planners and producers of educational broadcasts must maintain a direct liaison with teachers through such activities as:
    * regular school visiting to allow discussion with headmasters and class teachers;
    * group seminars, involving broadcasters and teachers, conducted on a regional or district basis.
  - the education authority should mount formal programmes of media utilization as part of its normal programme of teacher-development.
  - teachers should be appointed in a full time capacity to provide support to producers in programme compilation and to establish liaison between broadcasters and users.
  - producers of educational broadcasts should participate in pre-service and in-service training programmes both as consultants at the planning stage and directly in implementation.

ii) **Advance information**

* Prior to each school year, teachers should be supplied with the details of the educational broadcasts scheduled for the forthcoming year. This is essential for the integration of the broadcast resource with the school's courses, and is of vital importance in rural areas, where teachers may have to adapt their programme management to local issues of language, culture and educational standards.
* Teachers must also be provided with teacher's notes which establish the objectives of the individual programme, describe its contents and, where appropriate, give guidance for lesson preparation and follow up.
* Teacher's notes should be prepared by either:
  - a trained teacher who has access to the planning and scripting processes, or
  - the scriptwriter, working in collaboration with a trained teacher, who may also be the programme's producer.

iii) **Support materials**

* Many broadcasts are augmented by support materials intended for student use and

intended as a supplementary text based on the programme content. The appropriate authorities should, at the planning stage, consider whether the value of a particular programme series (as, for example, in science or language training) would be enhanced by such a publication.

Supplementary materials of this type should be:

- specific to the objectives and contents of the programme, and designed to consolidate the concepts presented rather than to extend them;
- produced cheaply;
- available to all sudents concerned. This requirement implies that governments must accept responsiblity for meeting publication and distribution costs.

* most education systems have developed other audio-visual materials, and frequently many of these have relevance to the broadcast series, either in consolidating concepts or extending them. Teachers should have these identified for them and informed of their availability, preferably through the teacher's notes.
* Programme promotion is essential to the development of educational broadcasting, since it is dependent for success on community, teacher and student acceptance. This can be implemented through:
  - broadcasting information about the purposes of educational programmes, excerpts of forthcoming programmes, and publicity announcements;
  - encouraging parents (through broadcasting, press statements, parent-teacher meetings and so on) to listen to or view programmes appropriate to their children's classes. This allows parents and children to share an educational experience, and provides a basis for worthwhile family conversations;
  - using newspapers to publish time-tables and other programme information.

iv) **Receiving equipment**

* The most sophisticated broadcasting system is only as effective as the capacity of the people to receive it. The investment of funds in programme production and transmission facilities is wasted unless the majority of schools have dependable receiving equipment. Cost-effectiveness is directly proportional to audience size.

  Governments should:

  - establish standing committees to:
    * establish specifications for efficient receivers;
    * assess receivers as they come on to the market;
    * devise administrative procedures for bulk or contract buying and so reduce costs;
    * ensure that schools are adequately equipped. This may require the definition of priorities, with schools in disadvantaged areas receiving preferential treatment.

* Many schools lie outside of the range of transmitters, and it is usually these rural areas which are deficient in educational resources of all types. For them, broadcasting can be a cheap resource which will advance a country closer to the goal of universalization. The Meeting recognised that there are many problems to be overcome, and that no general solution can be arrived at. Therefore, individual governments should establish working parties to:
  - advise them on the feasibility of supplying tape play-back equipment for the replay of broadcast programmes previously recorded at a central or regional headquarters;

- consider means by which communications between remote areas and regional/central bodies can be improved, and especially to facilitate information and tape distribution;
- prepare cost-estimates of providing such a service, with informed statements about the educational advantages which could be obtained.

* Receiving and play-back equipment must be maintained in optimum working condition. Governments should:
  - provide maintenance technicians on such a scale that school equipment can be kept in working condition. Workshops may be established at central or regional locations, and do not require complex or expensive facilities;
  - purchase equipment which is easy to maintain. Most solid-state receivers have components mounted on a replaceable panel, and the simplicity of these should be exploited;
  - maintain a pool of stand-by receivers, which can be lent to schools which have suffered breakdowns while their own units are repaired;
  - provide all teachers with training in the care of equipment;
  - ensure that essential replacement components, such as batteries, are readily available;
  - establish simple records in schools and maintenance centres to monitor the consumption of parts, equipment performance and to provide a basis for stock-taking.

D. Evaluation of programmes

All through the proceedings of the Meeting, whatever the topic under discussion, the participants were unanimous that the successful development of educational broadcasting is dependent on constant monitoring and frequent evaluation, with the resultant data being fed back into key points of the system. Two purposes, expressed in general terms, are served by evaluating procedures:

* short-term objectives, such as:
  - the adjustment of programme content;
  - the adjustment of production techniques;
  - providing more appropriate teacher's notes;
  - the correction or improvement of teaching methods;
  - the monitoring of equipment performance
* long-term objectives, such as:
  - programme planning to integrate with curriculum change and development;
  - the allocation of priorities for the planning of programmes to meet specific school and/or community needs;
  - planning for the introduction or expansion of studio and transmission facilities, such as professional and technical staffing, buildings, engineering and transmitting requirements;
  - planning for effective pre-service and in-service programmes of teacher development.

These lists are neither comprehensive nor exhaustive, but give some indication of the range of resources and activities that should be subjected to continuing assessment. Because of their diversity, the Meeting is not competent to be specific in its guidelines to each category of resource, personnel or procedure which requires evaluation. Consequently, it has concentrated its attention on:

* definition of the target audience and its needs;

* planning of programmes;
* relevance of the broadcasts to the school curriculum:
* appropriateness of programme content and presentation to the ages and achievement levels of the pupils;
* suitability of the script and the quality of production;
* the programme's contribution to the learning process.

The participants reported on evaluation projects undertaken in their own countries and referred to major studies in educational broadcasting which had occurred in America and Europe, and came to the conclusion that there is no single assessment mechanism in any of the component areas which can serve as a model for unqualified application. However, the techniques devised so far have achieved reasonable levels of validity and, in most cases, have identified those aspects of programme planning, development and utilization which are amenable to improvement.

It was apparent that in a number of member countries, evaluation and assessment are given low priority and therefore their effectiveness as significant tools for the improvement of education generally and of educational broadcasting in particular is hampered by lack of funds, shortage of trained research personnel, and inadequate facilities for the processing of data. Too frequently, the time lapse between data collection and the feedback of results is so long that its impact is seriously reduced.

Guidelines for the provision of an evaluating service include:

* areas to be subjected to in-depth evaluation should be identified at the time of planning; the principle applies to each stage of planning such as overall broadcast schedules, production and scripting, and courses of teacher-training. Such assessment will be long-term in effect, but must be comprehensive in its coverage, specific to objectives formulated during the planning process, and objective in its techniques.
* short-term evaluation should be seen as, of necessity, more subjective in its techniques and findings, since it is essential that feed-back is immediate and should not be delayed by unnecessarily sophisticated data processing. It would be applied to such needs as the examination of particular production techniques, the composition of teachers's notes, some pilot programmes and a particular teaching strategy.
* the techniques in either type of evaluation would include:
  - interviews with administrators, community leaders, parents, teachers and pupils;
  - general questionnaires to assess programme usage across the nation;
  - questionnaires specific to particular problems and/or objectives, and distributed and processed according to appropriate scientific research procedures;
  - seminars to discuss previously identified topics;
  - school visiting by involved personnel to provide opportunity for on-the-spot observation.
* Consideration by governments of setting up a standing committee composed of educators, broadcasters, teachers and community representatives to maintain a continuous monitoring of educational broadcasts in all aspects. Such a committee would identify those particular questions which should be evaluated for long-term purposes, and give support to short-term and continuing assessment. Since some problems would have a technical basis, the committee should have power to co-opt, but should not include technicians in its normal composition.

E. Guidelines for training

The education of personnel is essential to any enterprise, and nowhere is this more true than of the broad field of educational broadcasting with its complex interrelationship of policy-makers at high levels of government, educators, teachers and teacher's aides, producers, script writers, technicians, engineers, administrators and so on. There are so many categories of specialised workers in the chain of educational broadcasting that the participants agreed that their attention must be limited to those who have a direct concern with planning, production and utilization.

Because of the complex needs, the participants felt that it would be misleading to express guidelines as a series of pointers to training programmes, although considerable discussion took place with a close examination of the facilities and procedures of many countries. Consequently, it was agreed that the discussion could best be summarised in the form of a table which described the training needs of certain key personnel, with the understanding that this would need to be interpreted within the context of a particular country's needs, expectations and resources. The table states the ideal, and is therefore not always possible to attain.

The summary is contained in the following table:

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Table 2: Guidelines for Training

CATEGORY (Personnel)		CONTENT OF TRAINING COURSE		TRAINING FACILITY
Classification	Title	Pre-Service or On Appointment	In-Service	
Media Management	Directors, Asst. Directors, etc.	• Personnel management • Finance – estimates and budget control • Buildings and plant supervision		Professional Training Institute (may be government-conducted or attached to a tertiary institution)
		Techniques of evaluation		By short-term attachment to a Research Organisation, preferably within the Ministry of Education
Production	Senior Producer	• Personnel management • Finance – estimates and budget control • Techniques of evaluation		As for management
			Up-dating of techniques	Attachment to other authorities in more developed countries
	Producer	• Media techniques/programme composition • Technical capabilities of studio equipment • Script-writing • Field camera/sound recording • Technical capabilities of field-recording equipment		Institute of Broadcasting (Training Division)
			Correction and up-dating of techniques	In-house, organised by and under the supervision of the Senior Producer
	Script Writer	Creative writing		Post-secondary Diploma of recognised institution.
			Techniques of writing for particular medium and for specific objectives	In-house, organised by Senior Producer in collaboration with subject specialists and educators

Table 2: Guidelines for Training *(Cont'd)*

CATEGORY (Personnel)		CONTENT OF TRAINING COURSE		TRAINING FACILITY
Classification	Title	Pre-Service or On Appointment	In-Service	
	Graphic Artists	Creative art, in several media including three dimensional modelling		School of Art, or Art Department of a recognised post-secondary institution
			* Techniques for particular media and for specific objectives * Up-dating	* In-house, organised by Senior Producer in collaboration with subject specialists, educators and experienced personnel from within the organisation or other home country institutions * Secondment to similar organisations; where necessary, experience in more developed countries
	Sound Recordists, Editors, Cameramen and other Studio Support Staff, such as Script Assistants, Floor Managers, etc.	Techniques as appropriate		Institute of Broadcasting (Training Division)
			* Up-dating of techniques * Continuous monitoring, assessment and review	Institute of Broadcasting (Training Division) Under supervision of Senior Producer, using in-house staff expertise
Utilization	Teachers	Teacher training, including significant syllabus of media utilization		Teacher training institutions
			Specific techniques of media utilization, including such topics as: – integration of programmes in learning schedules – effective time-tabling – programme usage, (preparation and follow-up – evaluation – equipment management	* Formal courses organised by education authorities and using appropriate specialist personnel, including producers and planners of broadcasts * School visiting by broadcast officers and producers * Published materials covering programme information, methodology and techniques of evaluation

Table 2: Guidelines for Training *(Cont'd)*

CATEGORY (Personnel)		CONTENT OF TRAINING COURSE		TRAINING FACILITY
Classification	Title	Pre-Service or On Appointment	In-Service	
	Teaching Aides, Tutors and other School Support Personnel	Such skills determined by the employing authority as being relative to the functions to be performed.		Appropriate training as determined by the Ministry of Education
			Techniques appropriate to duties in respect to media use	In-school (or relevant institution), organised by head teacher or other immediately accessible authority; providing for contact with broadcast officers, producers on a continuing basis
Evaluation	Senior Researchers	Personnel management		As for management
			Advanced research techniques in media evaluation	* Tertiary institution specializing in media. * Attachment to appropriate organisation in more advanced countries
	Research Officer	Research techniques, with specialization in education		Tertiary institution
			Techniques appropriate to educational broadcasting	In-house, organised by Senior Researcher in collaboration with media managers, producers and broadcast officers

CHAPTER V

RECOMMENDATIONS/SUGGESTIONS

Universalization of education was found to differ from country to country. Experiences extracted from the participants were discussed and after exhaustive deliberations on the problems, the Meeting came up with the following recommendations/suggestions:

A. To Member States

1. Educational broadcasting should be adopted to support formal and non-formal education programmes for the universalization of education.
2. Concerted efforts should be made towards strengthening facilities in the areas of (a) management, (b) production, (c) utilization and (d) evaluation of educational media.
3. There should be a provision for a purposeful and effective coordination between educational broadcasting agencies and other agencies concerned with the promotion of the universalization of education.
4. Adequate provisions of hardware and software should be ensured to facilitate effective utilization of the media.
5. Provision for training should be made at different levels, for personnel engaged in the field of educational broadcasting, especially those in non-formal education.

B. To Unesco/ACEID

1. Efforts should be made to provide increased support to national efforts in the training of educational broadcasting personnel in the form of more opportunities for:
   a) Study visits and attachment programmes for specific purposes;
   b) Development of instructional modules;
   c) Advisory/Consultative services,
   d) Exchange of information and media materials.
2. Arrangements should be made to assist the member states in organizing national workshops and subsequently regional workshops to follow-up the programme of the present Meeting. The objectives of the regional workshops could be to synthesize the experiences of member states in educational broadcasting for the development of some common guidelines in the area, specifically to formulate strategies for the development of self-instructional training modules for different categories of personnel involved in educational broadcasting.

ANNEX I

AGENDA

1. Inauguration of the Meeting and Election of Officers of the Meeting

2. Consideration of the Agenda and Provisional Schedule of Work of the Meeting

3. Experiences of the Countries in the Area of Educational Broadcasting

4. Development of Guidelines for Production, Use and Evaluation of Educational Radio/TV Programmes

5. Consideration and Adoption of the Report of the Meeting

5C

ANNEX II

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Philippines	Miss Soledad A. Vargas, Division NFE Co-ordinator (Private Schools), Announcer, "School On-the-Air Programme, c/o Promotional Staff, Division of City Schools, Iriga City – 4726.

Republic of Korea	Miss Myungja Nam, Head of Media Research, Educational Broadcasting Division, Korean Educational Development Institute (KEDI) No. 20-1 Umyeondong, Gangnam-Gu, Seoul, 134-03.
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Sri Lanka	Mr. B.L. Somaratne, Assistant Teacher, Curriculum Development Centre, 255 Banddhaloka Mawatha, Colombo 7.
Thailand	Miss Napa Bhongbhibhat, Director, Centre for Educational Technology, Non-Formal Education Department, Ministry of Education, Bangkok 3.
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ANNEX III

Speech by Datuk Chan Siang Sun, The Honourable Deputy Minister of Education, Malaysia, at the Opening Ceremony of the APEID Technical Working Group Meeting on Educational Broadcasting at Institiut Penyiaran Tun Abdul Razak (IPTAR) on Monday 19th November 1979 at 10.00 a.m.

I am greatly honoured to be invited to address this distinguished gathering, in particular the participants of the Technical Working Group, that is, people whose work are in the field of broadcasting, be they in educational radio or educational television.

We are all aware that the methodology in teaching techniques is now undergoing a tremendous change. This is in line with the fast development of technology itself. Education in the classroom, in order to progress, has to keep up with the expansion of knowledge, which is increasing at a rapid pace. Thus, no longer can we adhere solely to the use of chalk and talk method of delivering information to the children we teach. No longer can this means of communication be sufficient today, where listening to the radio and viewing the television programmes have become a way of life outside the school walls, even in many a remote rural area. Moreover, as far as the children are concerned, the talk and chalk method of teaching can be less stimulating, as compared to learning through the use of educational media, that is, radio, television, films, slides, pictures, charts and other innovations. How interesting a lesson could be for a learner if he or she does not only hear an audial message, but if this message is reinforced visually. Thus, to cite an example, he or she may be able to observe, thanks to educational technology, the process of the growth of a plant. How absorbing a lesson could be when the television receiver, for example, portrays the life cycle of a frog in a biology lesson. Learning is reinforced where that which is to be learnt is conveyed through various sensory media. The teaching-learning process then is no longer a painful chore, but an exciting adventure of discovery giving a double joy to both the teacher and the taught.

However, it must be borne in mind that educational media, whether simple or small media such as picture or charts, or more sophisticated items such as 16 mm films, television, computer-assisted instructions, depend for their effectiveness on the teachers' skills in integrating them in their teaching techniques.

It is pertinent to point out at this stage, however, that these educational media are never meant to supercede or make redundant the teacher. The teacher, even with the introduction of educational media, reigns supreme in the classroom. He utilizes these media in his basic task of helping the children learn. In other words, the media he uses are meant to supplement and complement his daily work.

I think at his juncture it is appropriate that I should sound a word of caution: Use of educational media does entail extra work. It requires that the teacher select the appropriate media, prepares the children (the learners) to derive maximum benefit from the media, and also necessitates a measure of carefully planned follow-up activities. It will be seen that the extra work required is compensated for by the enhancement of learning, the enhancement of effective teaching, which in the long run will obviate the tedium of remedial teaching, and reduce the need for repetitous work.

In Malaysia, the Ministry of Education has supplied TV receivers to schools when educational television was launched about seven years ago. Although educational radio programmes have been broadcast many years earlier, in the past radio cassette recorders had not been supplied to schools in Peninsular Malaysia, though schools in Sabah and Sarawak have been provided this equipment. The schools, on the other hand, were encouraged to buy their own receivers. Now the Ministry of Education is extending the supply of radio cassette recorders to schools in Peninsular Malaysia in 1980.

With the supply of these radio cassette recorders to schools, it is hoped that the schools would not only utilize them fully, but also, where educational radio broadcasts are concerned, initiate action to dub educational radio programmes and use them as and when required, thus overcoming the problems normally faced by schools in having to listen to direct broadcast – the problems of adjusting the time table, of lesson pacing, of the inavailability of programmes when actually required, and others.

In the area of visual media, other than educational television and educational radio, the Ministry of Education has also taken steps to supply slide projectors to various school district-centres in Peninsular Malaysia. These slide projectors are to be shared by a number of schools in the vicinity of the centre. These centres, totalling 300, are mostly located in rural areas. The schools in the vicinity should make every effort to utilize the facilities afforded in order to present the lessons more interestingly, and make learning for the children more pleasant and meaningful. It is also hoped that with the equipment thus provided, it would form a nucleus for the member schools of the various centres to initiate action on common educational media activities in the form of making their own slides and other teaching materials, which would be shared among themselves.

On broadcast media, on the other hand, we still have some problems to solve. I sincerely hope that during the next few days you will generate fruitful discussion regarding the use of media for educational purposes. Educational broadcast medium, especially television, is a new teaching medium to developing countries. It is hoped that those countries that have already launched either educational television service or educational radio programmes, or both, should share their experiences with the delegates of other countries in this meeting. At the same time, those that have the services already established should exchange their experiences in order to find ways to overcome their existing problems.

In conclusion, the deliberations and recommendations arrived at in this meeting should serve as a useful guide to all of us, especially regarding the benefit and the effective utilization of educational broadcasting.

It is now my pleasant duty to declare this Technical Working Group Meeting open.